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**Textiles - Woven apparel fabrics -
Specification**

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Foreword

This Ethiopian Standard has been prepared under the direction of Technical Committee for Textile-Fabrics (TC 70) and published by the Ethiopian Standards Agency (ESA).

In preparing this Ethiopian Standard reference has been made to the following:

ARS 655: 1991 Textiles - Woven apparel fabrics - Generale requirements published by Afrian Regional Organization for Standardization

Acknowledgement is made for the use of information from the above publication.

Textiles - Woven apparel fabrics - Specification

1. Scope

This Ethiopian Standard specifies the requirements for woven fabrics meant for apparel purposes. The standard does not specify requirements for the fabric construction as well as the types of fibres that have to be used for the fabrics. The standard is not applicable to woven fabrics meant for suiting's as well as fabrics containing wool and other natural animal fibres.

2. References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ES 6583 Code of Practice for Grading of Textile Fabrics

ES ISO11827 Textiles - Composition Testing - Identification of fibres

ES ISO22198 Textiles — Fabrics — Determination of Width and Length

ES ISO 3572 Textiles - Weaves - Definitions of General Terms and basic Weaves

ES ISO13934-1 Textiles —Tensile Properties of Fabrics —Part 1: Determination of Maximum force and Elongation at Maximum force using the Strip Method

ES130 Yarns- Determination of Extractable Matter

ES ISO 6330 Textiles — Domestic Washing and Drying Procedures for Textile Testing

ES ISO 3801 Textiles -Woven Fabrics-Determination of Mass per unit Length and Mass per unit Area

ES ISO12945-1 Textiles- Determination of Fabric Propensity to Surface Fuzzing and to Pilling — Part: 1 Pilling Box Method

ES ISO 105-B, C, E and X parts of Colour Fastness

3. Definitions

For the purpose of this Ethiopian Standard, the following definitions shall apply:

3.1.

Product unit

One unit of the final product consisting of the sealed package.

3.2.

lot:

Collection of product units of the same width, fibre type, design and colour-way which have been manufactured or processed under essentially the same conditions.

3.3.

sample:

Portions of the lot which are drawn for inspection or testing purposes.

3.4.

defective:

A sample that does not conform to one or more of the specified requirements of this standard.

4. Requirements

4.1. General requirements

4.1.1. The fabric shall be uniformly woven with straight and even selvages. It shall be free from stains and other weaving defects as ES 6583

4.1.2. Dyed fabrics shall be of uniform colour while printed fabrics shall be free of misprints.

4.2. Fibre composition

When tested by the methods of test described in ES ISO 11827, the fibre composition of the fabric shall be as indicated on the label.

4.3. Dimensions

The length and width of the fabric, determined in accordance with the methods of test prescribed ES ISO 22198.

4.4. Weave

The weave of the fabric, determined in accordance with ES ISO 3572, shall be as indicated on the label.

4.5. Specific requirements

The fabric shall conform to the requirements of table 1.

5. Sampling

Sampling for inspection and testing shall be undertaken according to the method described in annex A.

6. Tests

6.1. Methods of test

Samples of the fabric shall be tested in accordance with the methods of test indicated in table 1.

Table 1 - Requirements for textile fabrics

Characteristic	Requirement for			method of test
	100% Cotton	100% man -made fibre	Cotton & man- made fibre blend	
Breaking strength in Newton's, minimum, in either warp or weft direction	120	180	160	ES ISO 13934-1
Added matter, %. maximum	3,0	2,0	2,0	ES 130
Dimensional change in washing and	±5	±2	±2	ES ISO 6330

drying, %. Maximum in either warp or weft direction				
Mass per unit area, gram per metre ² , minimum	110	90	100	ES ISO 3801
Pilling resistance, minimum rating	-	4	4	ES ISO12945-1
Colour fastness tests to:				
a)light (minimum)	4	5	5	ES ISO105-B01 & B02
b)Washing (minimum)				
- colour change	4	4	4	
- staining	3	3	3	ES ISO 105-C Parts
c)perspiration (minimum)				
- change in colour	4	4	4	
- staining	3	3	3	
d)Rubbing (minimum)				ES ISO105-E04
- Dry	4	4	4	
- wet	3	3	3	ES ISO105-X12

Note: a) For 100% cotton, use either Part C04 or Part C05

b) For 100% man-made fibre, use Part C01

c) For cotton and man-made fibre blends, use Part C03

6.2. Testing

6.2.1. From the bulk samples obtained by A.1 of annex A, inspect the lot for the following characteristics:

- packaging and marking;
- Width of rolls;
- Length of rolls;
- Presence of stains, holes and other weaving defects.

6.2.2. From the laboratory samples obtained by A.2 of annex A, test for the requirements of table 1 and fibre composition.

7. Compliance

The lot shall be deemed to comply with the standard if after inspection and testing, it complies with the requirements of this standard.

8. Packing and Marking

8.1. Packing

8.1.1. Rolls

Unless otherwise specified by the purchaser, each piece of fabric shall be rolled full width and face inward on a tube. Only pieces of the same type, colour-way, design, width and finish shall be rolled on the same tube.

Each roll shall consist of not more than two pieces of fabric. No cut piece shall have a length less than a quarter of the total length of the fabric making the roll.

8.1.2. Bulk containers

Rolls of fabric shall be packaged in suitable bulk containers which shall not adversely affect the contents. Only rolls of the same type of material, design, colour and width shall be packed in one bulk container.

8.2. Marking

8.2.1. Rolls

The following information shall appear in legible and indelible marking on a label securely attached to each roll of fabric:

- a) name of manufacturer or registered trade mark or name, if any;
- b) fibre composition;
- c) width of fabric, in centimeters;
- d) length of fabric, *in* meters;
- e) Number of pieces (if more than one. In this case the length of each piece shall be declared);
- f) any special finishes applied to the fabric;
- g) type of weave;
- h) Country of origin.

8.2.2. Bulk containers

Where the rolls are packed in bulk containers, the following information shall appear on a label securely affixed to the container:

- a) name of manufacturer or registered trade mark or name, if any;
- b) fibre composition;
- c) number of rolls in container;
- d) total length of pieces in metres or total net mass *in* kilogram;
- e) type of weave;
- f) Country of origin.

Annex A (Normative) Procedure for sampling

A.1 Bulk sample (number of rolls from a shipment or lot)

Take at random from the shipment or lot the appropriate number of rolls shown in table 2. Ensure that no roll that shows signs of damage or dampness incurred during transit is included in the sample.

Table 2 Bulk sample

Number of rolls in shipment or lot	Number of rolls in bulk sample, minimum
3 or less	1
4 to 10	2
11 to 30	3
31 to 75	4
76 or more	5

A.2 laboratory samples

From each roll in the bulk sample, cut (from a position taken at random but at least 3m from an end of the piece) a laboratory sample of full width and of length giving a sample of an area not less than 3 m², Ensure that areas that are creased or that have visible faults are not included in a sample.

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- ❖ Develop Ethiopian standards and establish a system that enable to check whether goods and services are in compliance with the required standards,
- ❖ Facilitate the country's technology transfer through the use of standards,
- ❖ Develop national standards for local products and services so as to make them competitive in the international market.

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